August 10, 2020

Ms. Jenae Churchill
Project Manager/Biologist
Seattle District Corps of Engineers
P.O. Box 3755
Seattle, Washington 98124-3755

Reference: NWS-2016-350 Electron Hydro LLC (Diversion Repair and Spillway Replacement)

Dear Ms. Churchill:

I am writing to provide responses to the information requested in the noncompliance letter I received from you dated August 7, 2020, regarding recent construction activities conducted as part of the Electron Hydro LLC Diversion Repair and Spillway Replacement Project. We will discontinue further work waterward of ordinary high-water mark until we have provided all the requested information below. We understand that you are working to understand the situation more fully, and we provide this information in good faith toward that end. We are committed to work with you to identify the best path forward including immediate remedies, review of additional impacts, potential permit modifications, and mitigation measures.

Each of the information request items identified in the August 7, 2020 noncompliance letter is restated below along with our response. Two attachments include additional detail necessary to fully respond to your requests including water quality monitoring data, a chronology of events related to placement of unsuitable materials, and drawings depicting the current condition of the site and location of material placement.

a. ***Specific description of the work completed to date including placement and installation of all temporary construction measures (liner, astro-turf, containers, super sacks, etc.) and other elements of the project work that may or may not have been included in the permit. This description should also include drawings showing the current state of the site and placement areas of materials, as well as any quantifiable information on how much has been place and over what areas.***

   Response: Attachment 1 provides a detailed sequence of events describing the subject work completed to date along with drawings showing the current state of the site and placement area of materials. Estimated quantities of materials placed in the river are shown on the drawings for each area of interest.

b. ***Has the required water quality monitoring been ongoing during construction? If so, please provide the results of the upstream and downstream monitoring to date.***

   Response: Required water quality monitoring work has been ongoing during construction. Results of the upstream and downstream water quality monitoring to date are enclosed as Attachment 2.

*c. **Who did the work? If a contractor, please furnish name, address, and telephone number.***

Response: The subject work was performed by Electron Hydro staff.

*d. **Date when the work started.***

Response: Permitted work was initiated on August 17, 2018. Subject work identified in the noncompliance letter dated August 7, 2020, was initiated on July 15, 2020. Attachment 1 presents a detailed chronology of events relevant to the concerns identified in the noncompliance letter.

*e. **Reasons why the work was started before coordinating with our office on any potential modifications and why unsuitable material(s) were used.***

Response: Three different temporary material placements occurred during active construction related to isolating the work area from flowing water:

- Placement of Field Turf as a soft underlayment to prevent damage to the HDPE thermo-welded plastic liner in the channel conveying river flow around the active work area,
- Placement of metal shipping containers filled with river rock to form a portion of the temporary coffer dam (instead of wood wall), and
- Placement of concrete manhole rings (instead of super sacks) to form a coffer dam within the isolated active work area.

Each of these decisions was made in response to specific field conditions observed during active construction. We made these decisions based on our judgment that these field adjustments would be allowed within the flexibility of the design drawings. We understand now that these field adjustments should have been made in consultation with you based on your letter, our review of the subject permit conditions, and our direct observations of the unintended consequences. Our judgment at the time was driven by our focus on the intended functions for these project features, and each of these decisions was made in response to observed functional risks determined only when they became apparent during installation. The locations of these project features are consistent with the plans and as of the work shutdown they were functioning as intended. Our real-time decisions did not consider that these materials may not be allowed under the conditions of our permit as we focused on making these project elements function properly to protect the work and maintain a safe work site. We recognize that was a mistake and we are prepared to remedy any unintended potential consequences of our actions and bring the project back to compliance.

*f. **The name, email, phone number and address of the consultant hired to resolve the unauthorized impacts to waters of the U.S.***

Response: Electron Hydro LLC has secured the services of Shane Cherry (Washington Licensed Geologist #1180, fluvial geomorphologist) to assist in resolving the unauthorized impacts to waters of the U.S. Our staff includes fish biologists and other environmental professionals who will also support our response, and if necessary, we will secure the services of additional consultants with other technical specialties to support this effort. Mr. Cherry's contact information is: shaneconsulting@comcast.net, 11063 Sparkleberry Drive, Fort Myers, FL 33913, (425) 218-9748. Mr. Cherry gained an in-depth knowledge of the Puyallup River and the subject project having spent approximately 2,000 hours providing sediment transport and hydraulic analysis in support of multiple aspects of the spillway replacement design.

The Electron Hydro facility supplies renewable energy to over 20,000 homes replacing diminished regional energy supply related to closure of a coal fired power generation facility. The ongoing construction work is essential to enable the installation of fish screens that will bring this 116-year old project into compliance with modern standards. We believe lifting the stop work order would be most protective of the environment by effectively stabilizing the river prior to winter high flows and facilitating installation of critical fish screens.

We offer these responses to your specific information requests in good faith, and we reiterate our commitment to working cooperatively with you to figure out the best path forward. Motivation behind this project includes our goal to improve the overall fisheries health in the Puyallup River by improving the Electron Hydro facility and its operations. We remain dedicated to that goal, and we will cooperate with you to resolve these compliance issues quickly and effectively, avoid future non-compliance, and complete the project with minimal environmental impact. The schedule for remaining in-water work is constrained by the in-water construction window (fish window) ending September 15. Please advise regarding next steps as soon as possible to ensure we can effectively remedy the immediate situation, complete permitted in-water construction, stabilize the channel prior to winter high flows, and enable the installation of critical fish screens.

Respectfully,

Thom Fisher

Electron Hydro, LLC

cc: Chris Spens
Shane Cherry

Attachment 1 – Detailed Chronology of Events
Attachment 2 – Water Quality Monitoring Data

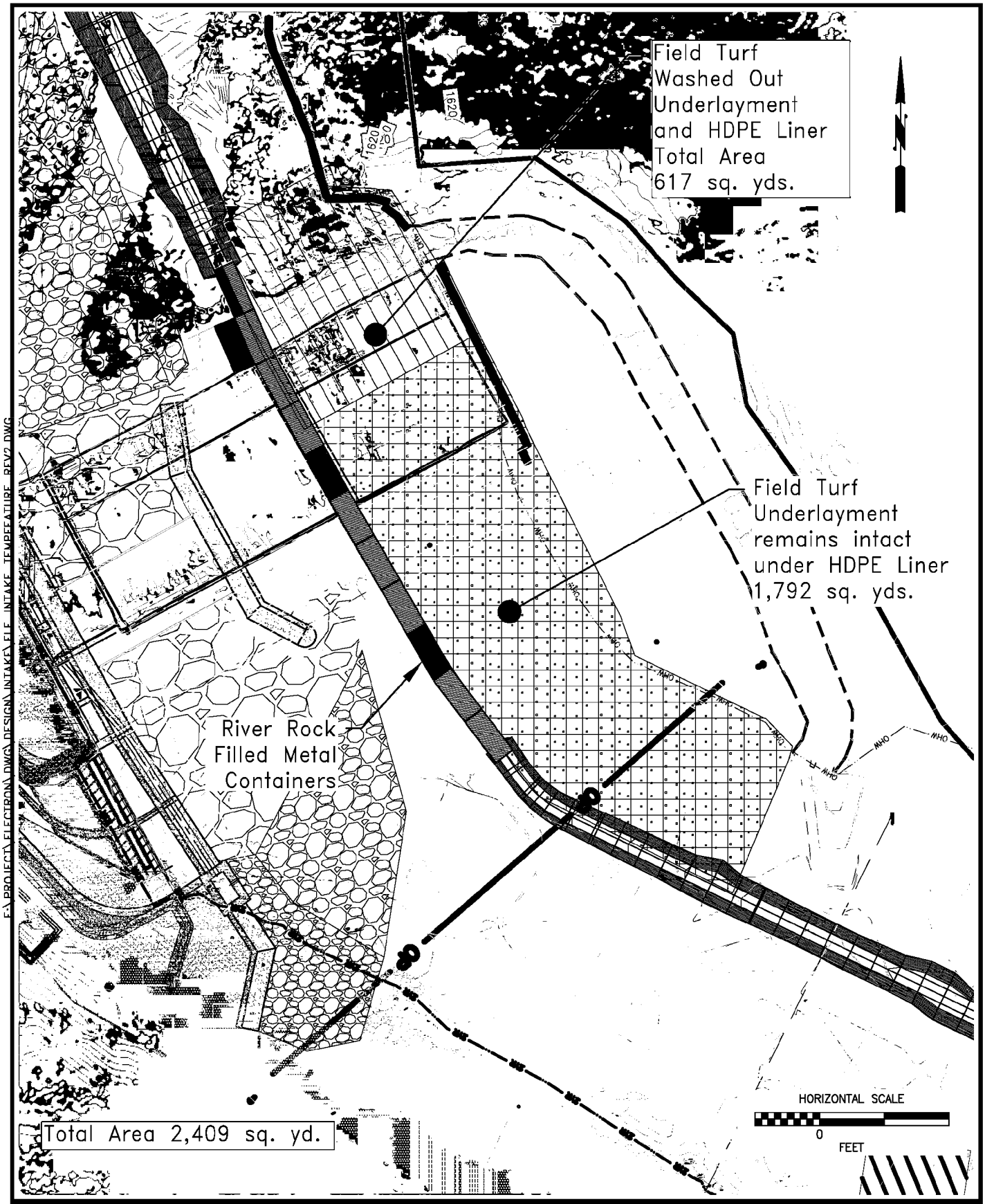
Attachment 1 – Electron Intake Repair Chronology of Events

7/15/2020	Initiated in-water work waterward of ordinary high-water mark
7/20 – 7/27/2020	Constructed temporary cofferdam, installed liner within bypass channel including base geotextile and Field Turf as an underlayment to protect the bypass channel liner.
7/28/2020	Diverted river flow into bypass channel
7/30/2020	After the river flow was diverted into the bypass channel, a portion of the downstream liner ruptured and transported Field Turf material and HDPE liner downstream
7/30 - 8/7/2020	Surveyed distribution of Field Turf and HDPE liner within 4000 ft downstream of work area and removed those materials from the river for disposal
8/4/2020	Electron Hydro notified the Corps, Pierce County, and WDFW that a limited release of material had occurred
8/7/2020	Received stop work notice from Pierce County and Corps
8/8 – 8/9/2020	Completed emergency stabilization of work area in consultation with Pierce County

Liner prior to diverting flows to the right bank - July 27, 2020

Liner view downstream after diverting flows to the right bank - July 28, 2020

Liner view upstream after diverting flows to the right bank - July 28, 2020



E:\PROJECTS\ELECTRON\DWG\DESIGN\INTAKE\FIE_INTAKE_TEMPERATURE_REV2.DWG

DRAWN: RDM	DIVERSION REPAIR, SPILLWAY REPLACEMENT AND BANK PROTECTION SITE PLAN TEMPORARY BY-PASS CHANNEL					
CHECKED: TAF						
DATE: 08/10/2020						
EXHIBIT OF	PIERCE COUNTY WASHINGTON	NO.	DATE	REVISION	BY	CK

Attachment 2 - Water Quality Monitoring Data

Date	Day	Sampler	Time	Location	Turb1	Turb2	Turb3	Turb4	Turb Avg. (cm)	NTU	1 NTU	
7/15/2020	Wednesda	MV	8:10	Upstream Background	5.4	5.2			5.3			
			9:00	Point discharge from settling pond	4.5	4.2			4.35		0.95	17.92%
			14:40	Upstream Background	8.2	8.1			8.15	175		
			15:30	Point discharge from settling pond	6	6.4	6		6.13	245	70	24.79%
7/18/2020	Saturday	MV	12:15	Upstream Background	7.6	8	8		7.87	87		
			12:45	Point discharge from settling pond	7.2	7.2			7.2	109	22	8.51%
7/21/2020	Tuesday	MV	12:00	Upstream Background	5.6	6.2	5.9	5.8	5.88	156		
			12:45	Point discharge from settling pond	4.2	4.2	4.4		4.27	197	41	27.38%
7/23/2020	Thursday	CK	NA	Upstream Background	~8				8			
			NA	Point discharge from settling pond	~6				6			25.00%
7/24/2020	Friday	MV	9:25	Point discharge from settling pond	5.4	5.3	5.5		5.4	170		
			11:20	Upstream Background	4	4	4.2		4.07	194	24	24.63%
7/30/2020	Thursday	MV	8:45	Upstream Background	4.4	4.2	4.5		4.37	>200		
			9:15	Point discharge from settling pond	3.6	3.5	3.4		3.5	>200		19.91%
7/31/2020	Friday	MV	7:45	Upstream Background	1.4	1.2	1.5		1.37	>200		
			8:15	Point discharge from settling pond	1.2	1.2	1.2		1.2	>200		12.41%
8/1/2020	Saturday	MV	13:15	Upstream Background	4.2	4.2	4		4.13	>200		
			14:00	Point discharge from settling pond	4.2	5	4.8	4.2	4.55	>200		-10.17%
			14:15	Downstream compliance point	3.6	3.8	3.8		3.73	>200		
8/3/2020	Monday	MV	9:15	Upstream Background	6.6	6.8	6.6		6.67	108		-78.82%
			10:00	15 m downstream of point discharge	5.6	5.8	5.6		5.67			
			10:15	Downstream compliance point	6.4	6.2	6.4		6.33	108	0	-11.64%
8/5/2020	Wednesda	MV	8:15	5 m upstream of point discharge	6.4	6.8	6.2	6.5	6.48			
			8:30	Downstream compliance point	5.6	5.2	5.6	5.4	5.4	134	-18	16.67%
			9:52	Upstream Background	6.9	7.4	7.2		7.17	116		
8/6/2020	Thursday	MV	10:35	Upstream Background	9.9	10.4	10		10.1	75.3		
			11:15	Point discharge from settling pond	0.6	0.6			0.6			94.06%
			11:20	5 m upstream of point discharge	11	10.6	10.8		10.8			
			11:30	Downstream compliance point	9	9.2	9.5	8.8	9.13	88.5	13.2	15.46%
8/7/2020	Friday	MV	10:30	Upstream Background	12.2	12.5	10.7	11.8	11.8	61		
			11:00	Point discharge from settling pond	7.8	7.9	7.9		7.87			33.31%
			11:10	5 m upstream of point discharge	12.5	12.7	11.6	11.8	12.15			
			11:25	Downstream compliance point	10.8	11.3	11		11.03	58.2	-2.8	9.22%
			12:50	Infiltration/settling ditch	12	11.4	10.8	10.4	11.15			

Notes:

1. Upstream background monitoring point is located at the bridge washout approximately 1000 ft upstream of work area boundary.
2. Downstream compliance monitoring point located at Staff Gage approximately 1500 ft downstream of work area boundary.
3. Point discharge from settling pond located approximately 850 ft downstream of work area boundary.
4. Infiltration/settling ditch excavated within in-water work area.